

Alternative Energy Pathways: making democratic choices

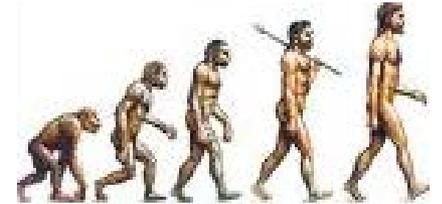
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www.steps-centre.org/
www.sussex.ac.uk/spru/
www.multicriteria-mapping.org
www.sussex.ac.uk/spru/people/peoplelists/person/7513

Presentation to conference of “Celebration of Science” Festival on
Energy Choices
Kensington and Chelsea Town Hall, London
8th August 2014

“Progress” as Social Control

“you can’t stop progress”



a linear deterministic vision
of technology-mediated
science-driven
Panglossian
apolitical
change

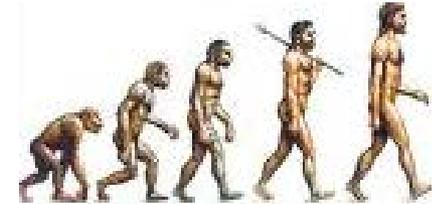
Whatever emerges from
incumbent interests
and structures
...is “progress”

“Progress” as Social Control

“you can’t stop progress”



synthetic biology



“we’ll restore science to its rightful place”...



“Our hope ... relies on scientific and technological progress”



“One can not impede scientific progress.”

PROGRESS



TECHNOLOGY



SCIENCE

Lisbon Strategy:
“pro-innovation action”
for *“Innovation Union”*



“... the Government’s strategy is pro-innovation”



... “history is a race to advance technology”
“strives to stay in the race”
“give technology the status it deserves”

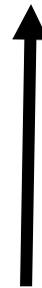


“Progress” as Social Control



synthetic biology

PROGRESS



TECHNOLOGY



SCIENCE



*“we’ll restore science to its **rightful place**”...*



*“Our **hope** ... **relies on** scientific and technological **progress**”*



*“One **can not impede** scientific progress.”*

So even academic analysis restricts attention to:

*how much?
how fast?
what risk?
who’s winning?*

Suppresses politics of:

*which way?
what alternatives?
says who?
why?*

The Channels of Control

eg: alternative infrastructures for 'the' zero carbon transition ...



market reform



behaviour change



nuclear power



carbon capture



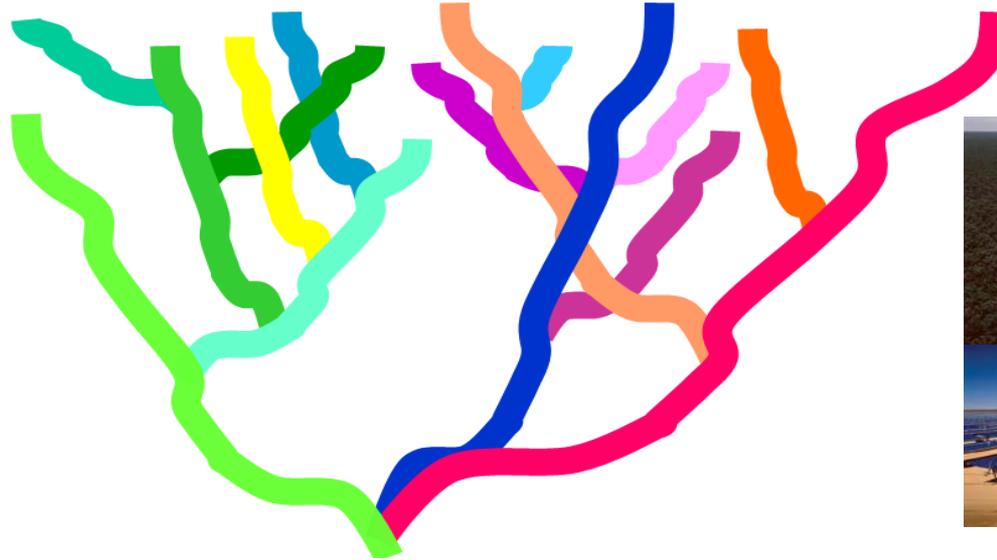
distributed renewables



new eco-cities



grassroots innovation



centralised renewables

History, economics, social science, philosophy, politics,
show divergent branching infrastructure innovation trajectories

... alternatives are matters for political, not managerial, institutions

The Channels of Control

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market reform



behaviour change



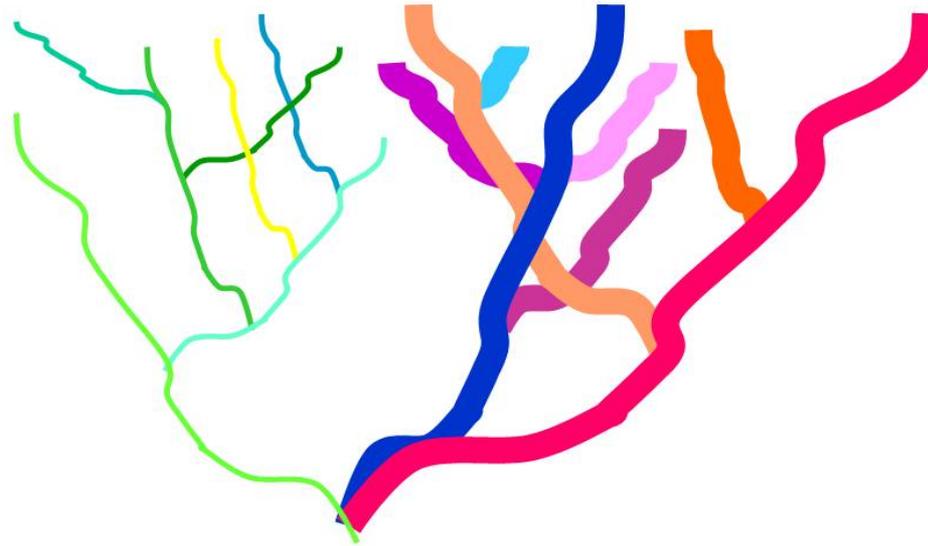
nuclear power



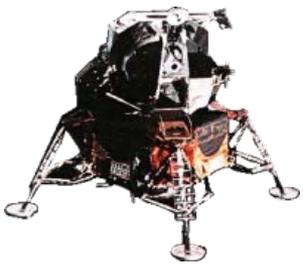
carbon capture



distributed renewables



centralised renewables



social studies:

Social choices get politically closed down

shaping (Bijker, 85)
expectations (Brown, 03)

co-construction (Misa, 03)
imaginations (Jasanoff, 05)

The Channels of Control

eg: alternative infrastructures for 'the' zero carbon transition ...



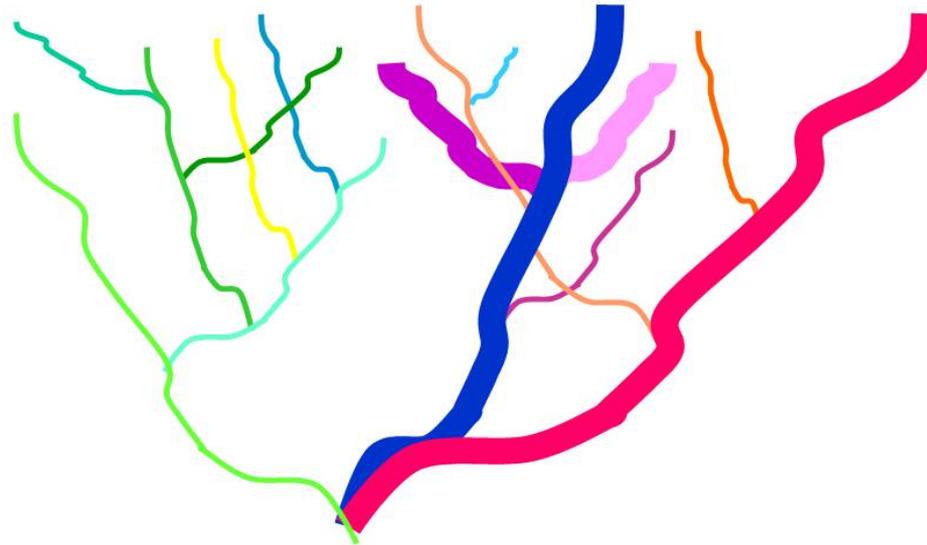
behaviour change



nuclear power



carbon capture



centralised renewables

Social choices get politically closed down

history:

contingency (Mokyr, 92)

path-dependence (David, 85)

momentum (Hughes 83)

path creation (Karnoe, 01)



The Channels of Control

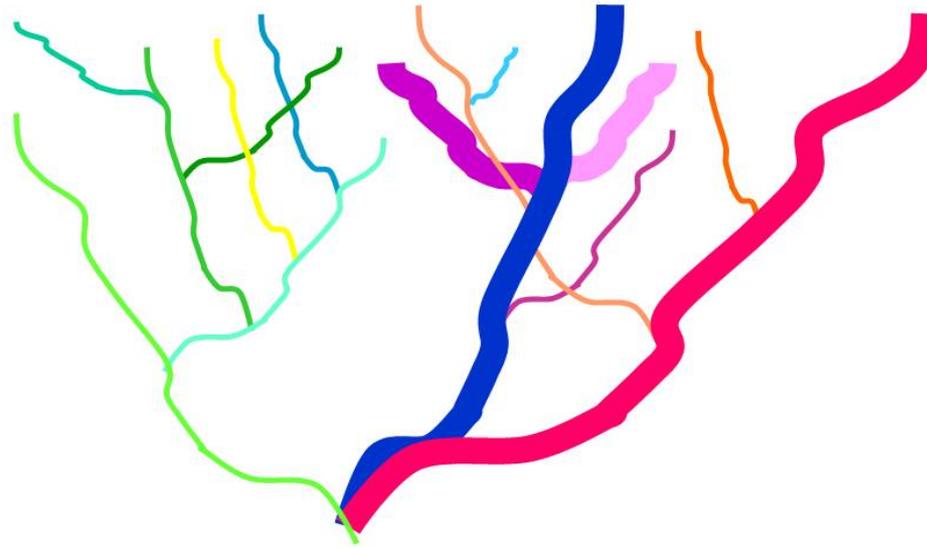
eg: alternative infrastructures for 'the' zero carbon transition ...



nuclear power



carbon capture



Social choices get politically closed down

**philosophy:
/politics**

autonomy (Winner, 77)
entrapment (Walker, 01)

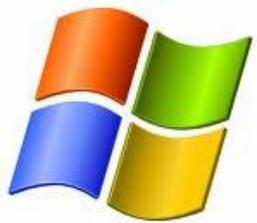
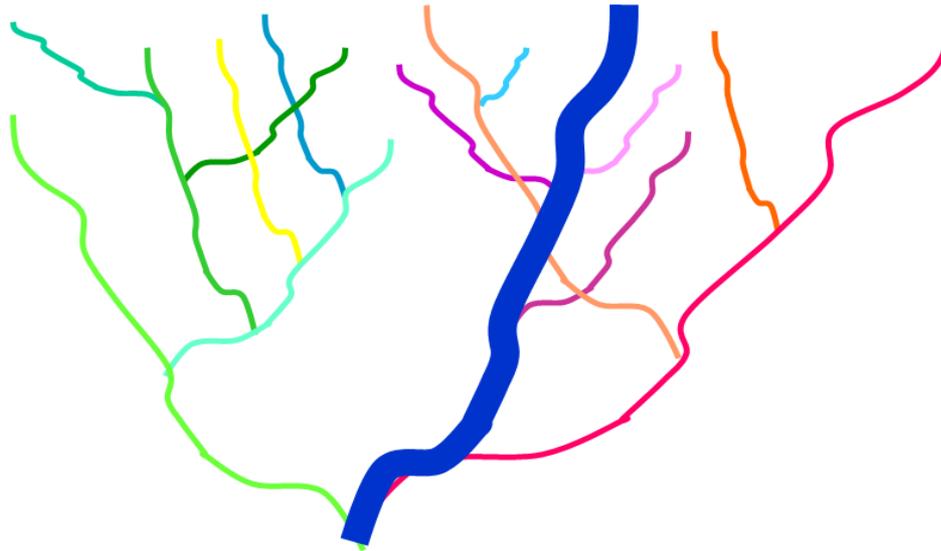
closure (Feenberg, 91)
alignment (Geels, 02)

The Channels of Control

eg: alternative infrastructures for 'the' zero carbon transition ...



nuclear power



Social choices get politically closed down

economics:

homeostasis (Sahal, 85)

regimes (Nelson & Winter, 77)

lock-in (Arthur, 89)

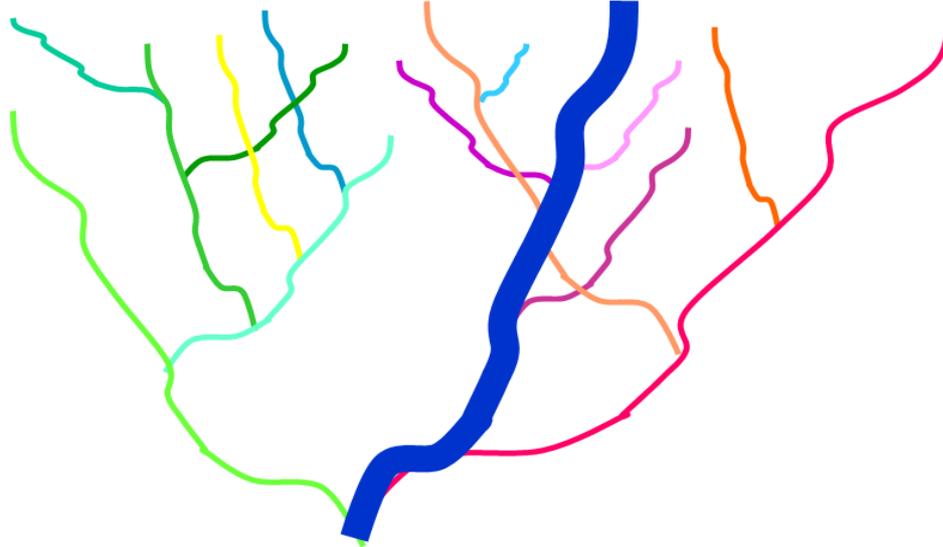
trajectories (Dosi, 82)

The Channels of Control

eg: alternative infrastructures for 'the' zero carbon transition ...

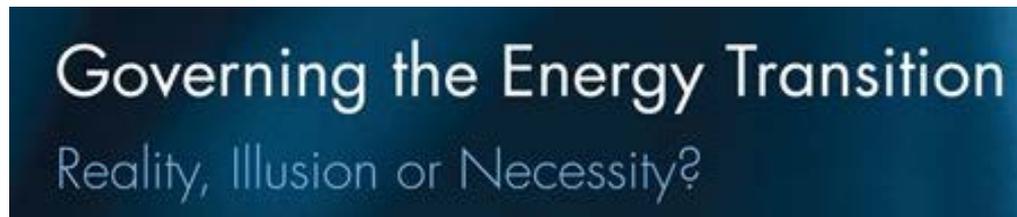
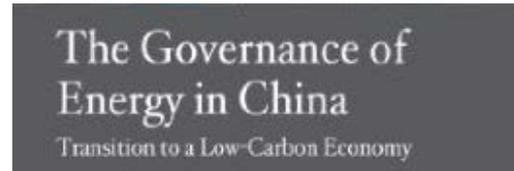
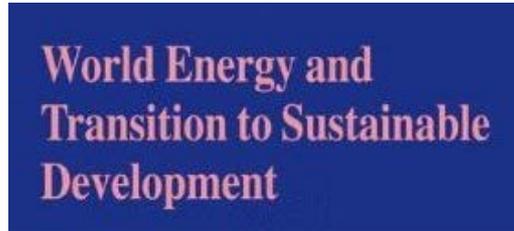
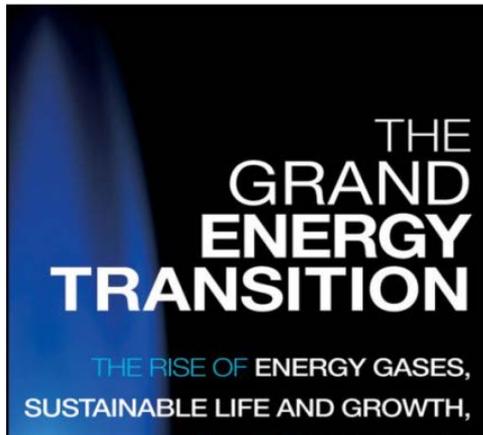


nuclear power

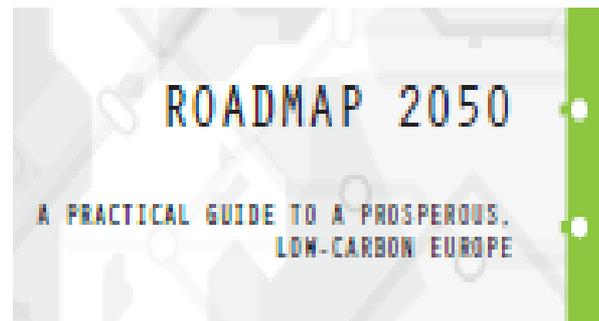


Not all that is scientifically **realistic**, technically **practicable**, economically **feasible**, socially **viable**, will be historically **realisable**

Managing 'the Sustainable Energy Transition'



 HM Government
**Enabling the Transition
to a Green Economy:**
Government and business
working together



The road to sustainable energy in Nigeria



Implementing
the EU Energy
Roadmap 2050:
At what cost
and at
what speed?

The Importance of 'Sustainability'

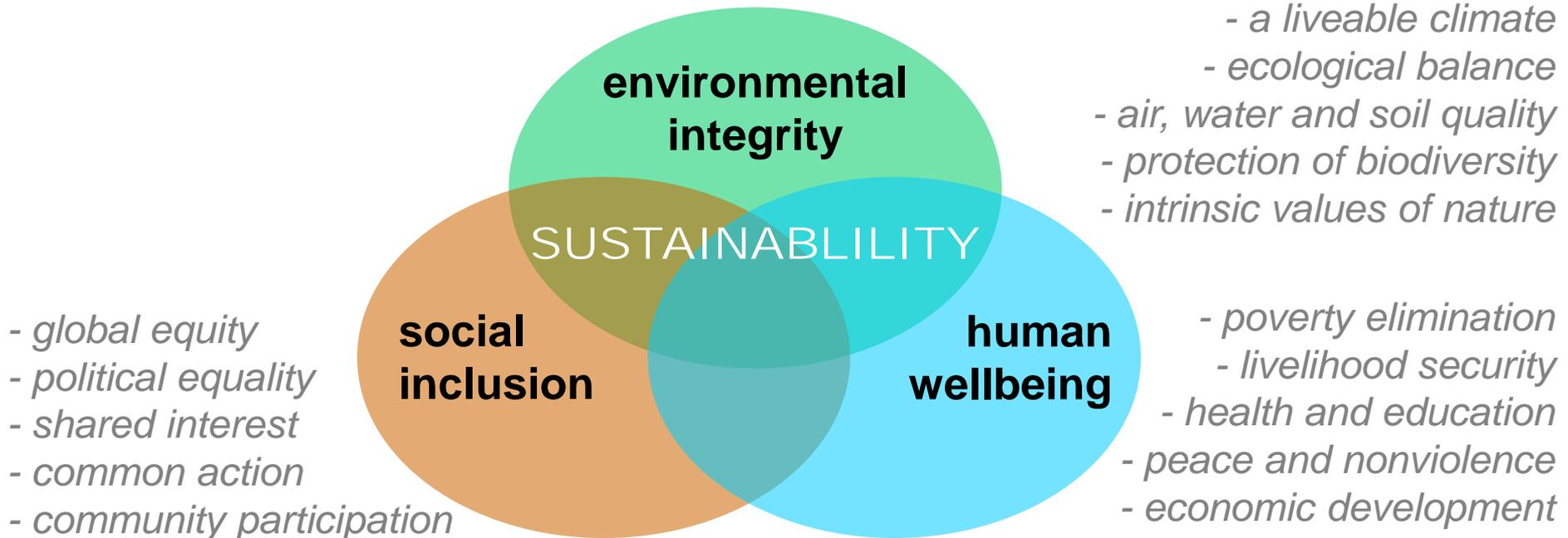


Brundtland (1987) codified key professed aims

“meeting the needs of the present, without compromising the ability of future generations to meet their own needs”

present needs have own diverse political voices

A “civilising hypocrisy” for challenge & accountability of direction



Need for “effective citizen participation” and “greater democracy”

'Sustainability' driven by Collective Action



Emancipation

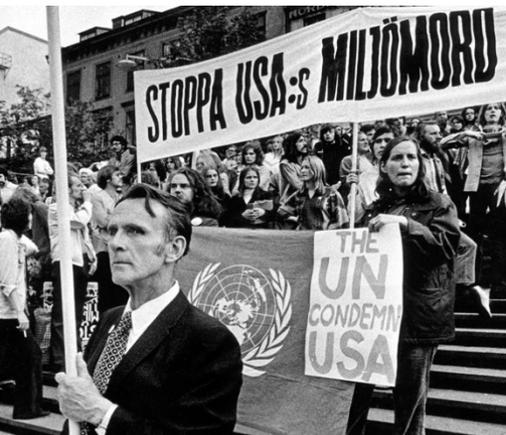
Equality

Ecology



So, sustainability transcends 'one-track Panglossian' notions of **"progress"** ... as merely **emergent** outcome of **incumbent** markets and power structures ... instead, provokes and **enables deliberate social agency** over contending interests and visions on **alternative directions** for progress

Result of **political struggle** by **social movements** resisted by elite governance



'Sustainability' Resisted by Formal Governance



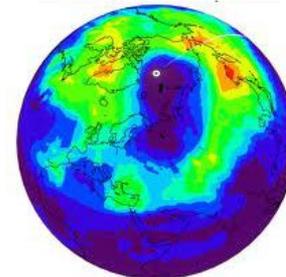
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Even the most specific environmental issues, all initially **vigorously resisted** pesticides... asbestos... radiation... lead... carcinogens... CFCs... EDCs...



Suppression of Sustainable Innovation



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And innovations now mainstream were initially excluded and suppressed
organic farming... wind turbines... super-efficiency... closed cycle production...



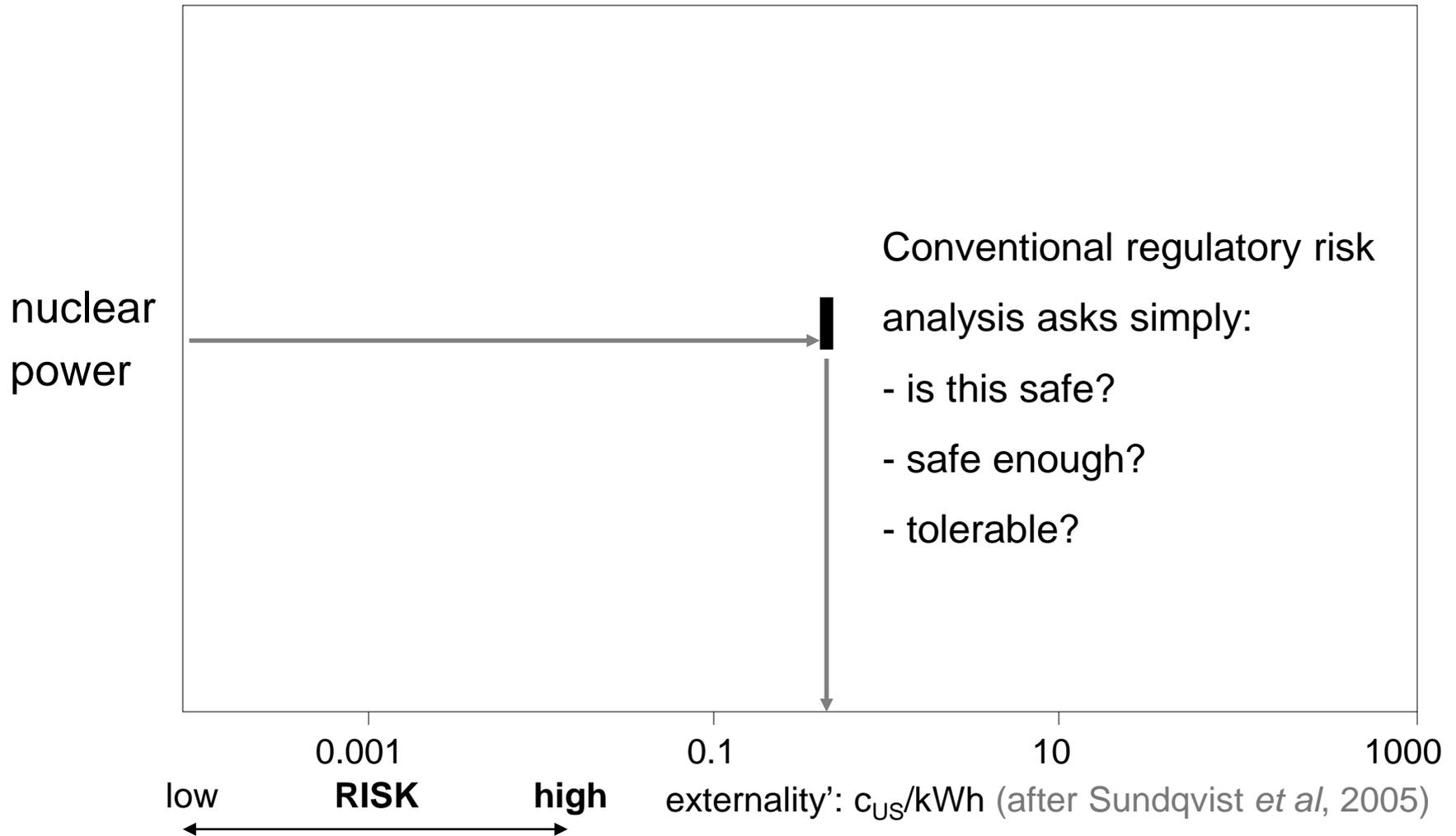
Where 'Sustainability' is addressed as being about social control rather than collective action, it betrays its own foundations

The Poverty of Risk Assessment

Energy regulation: most mature, sophisticated comparative analysis...

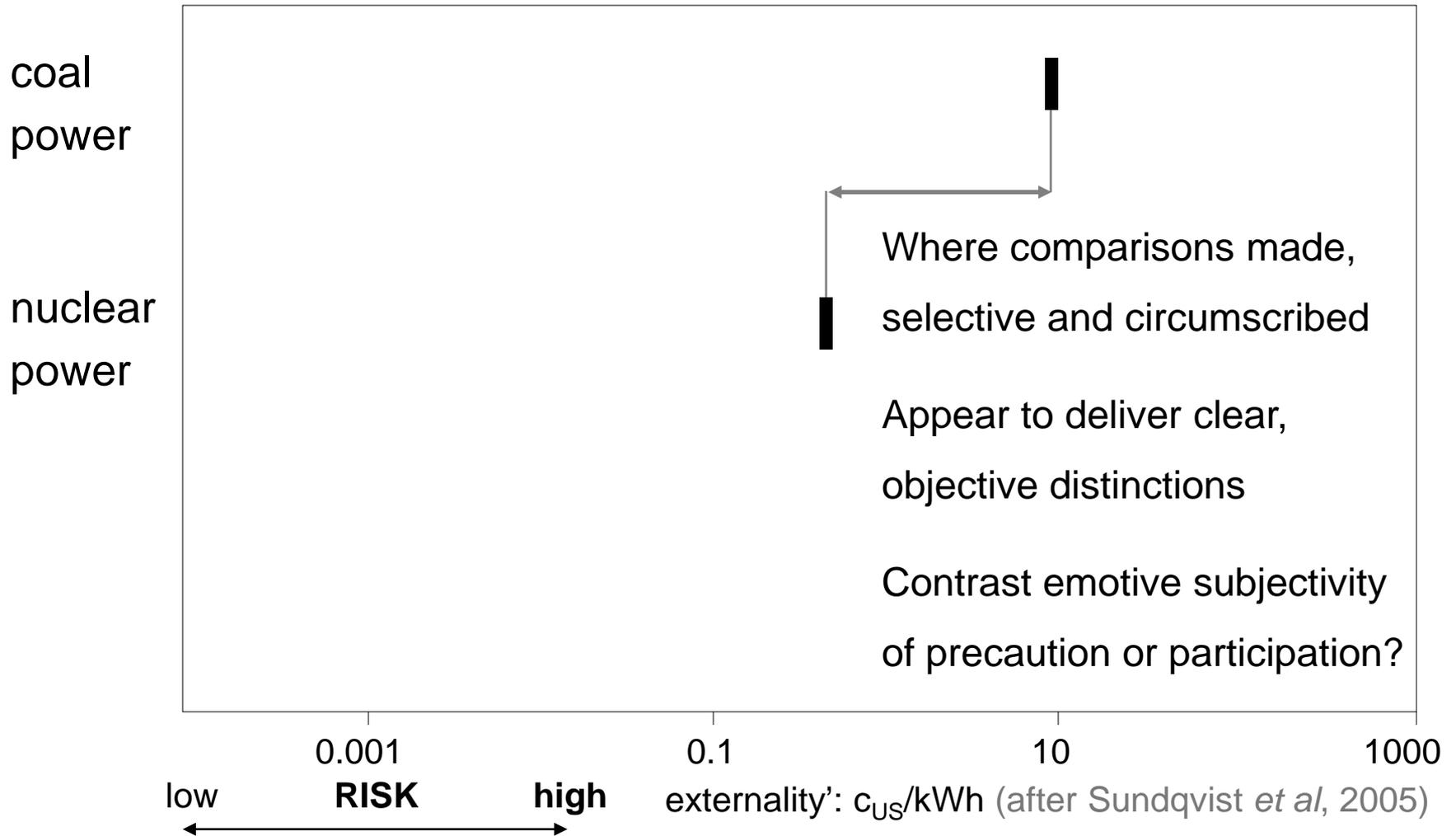
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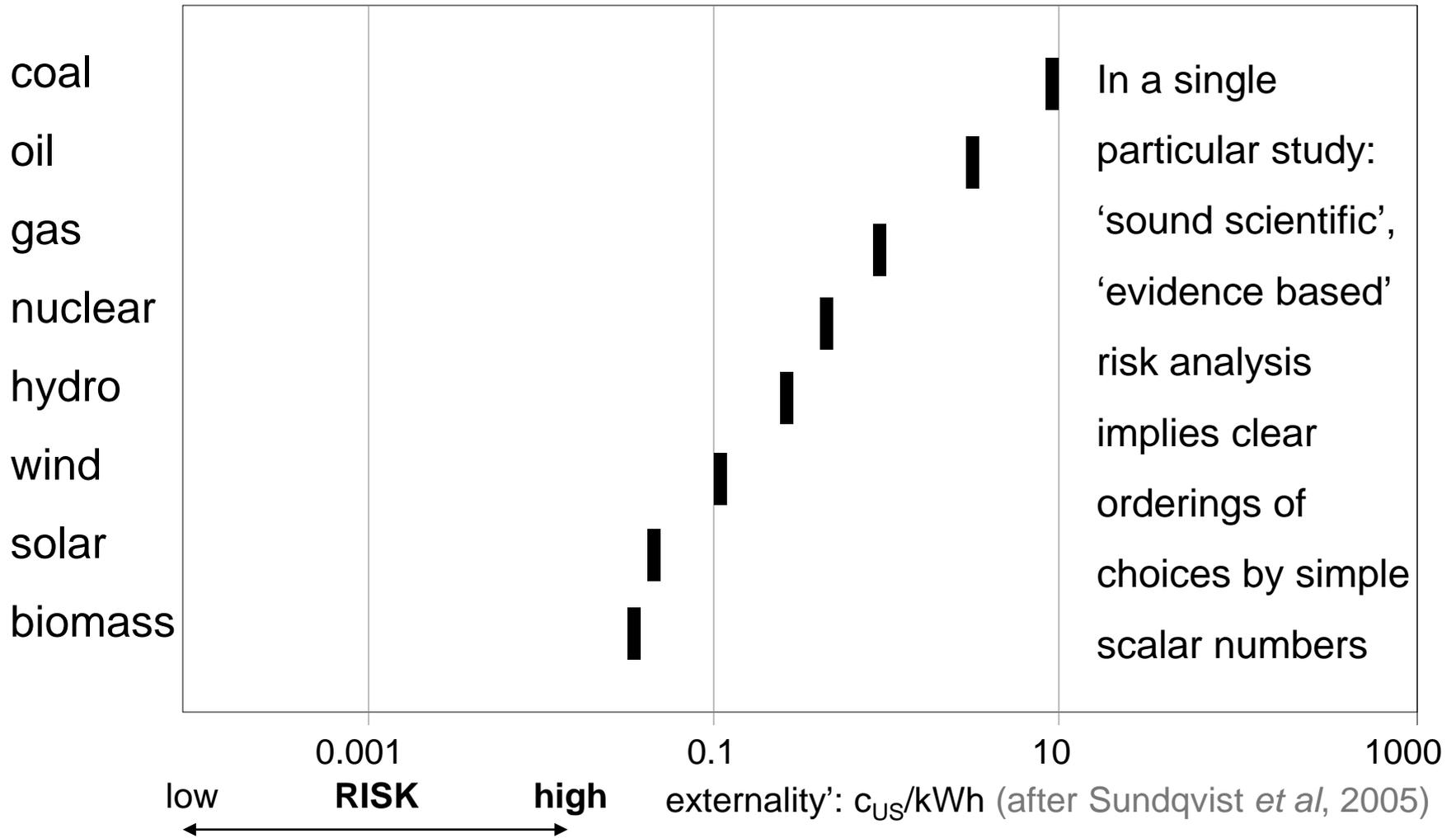
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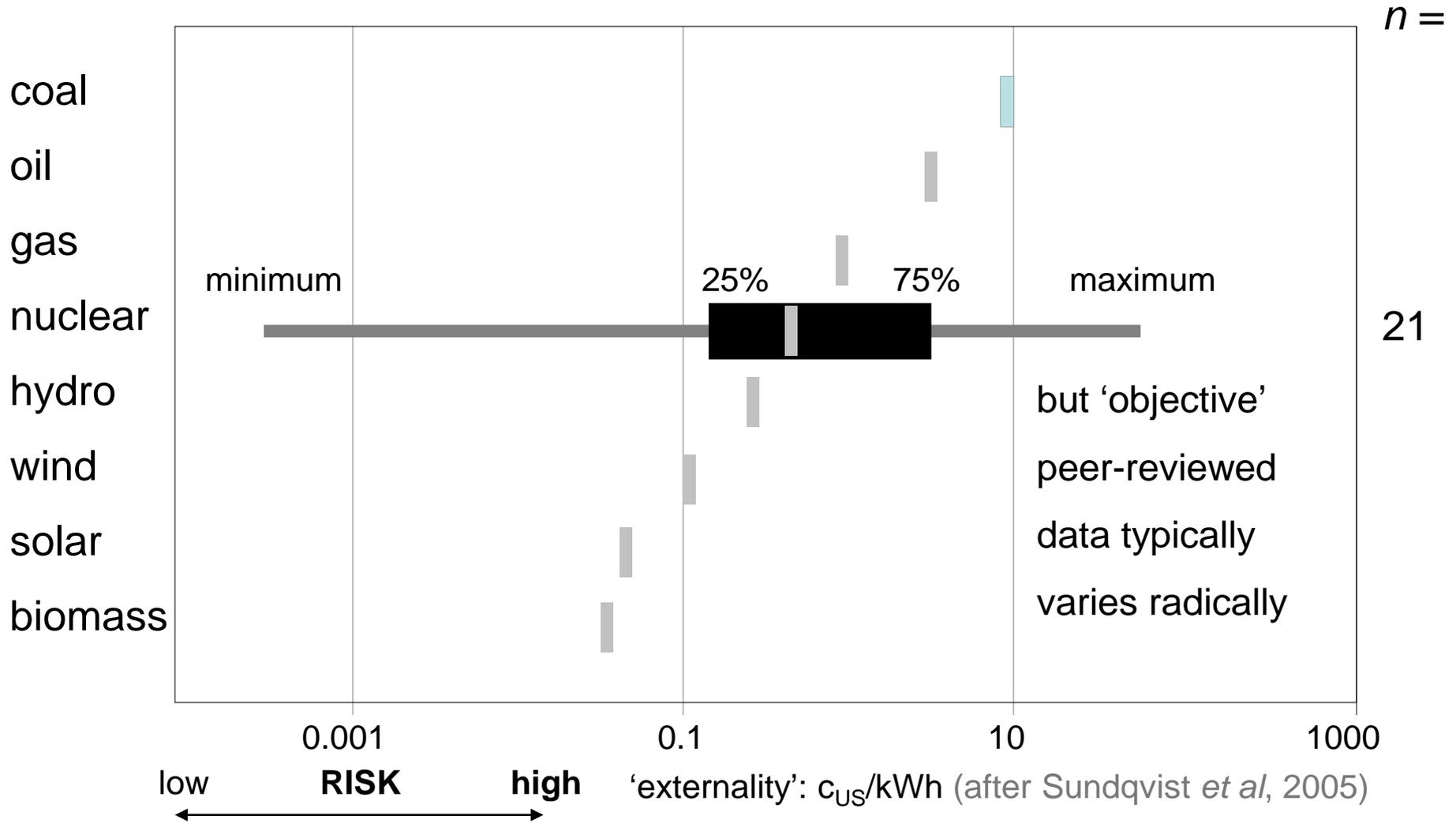
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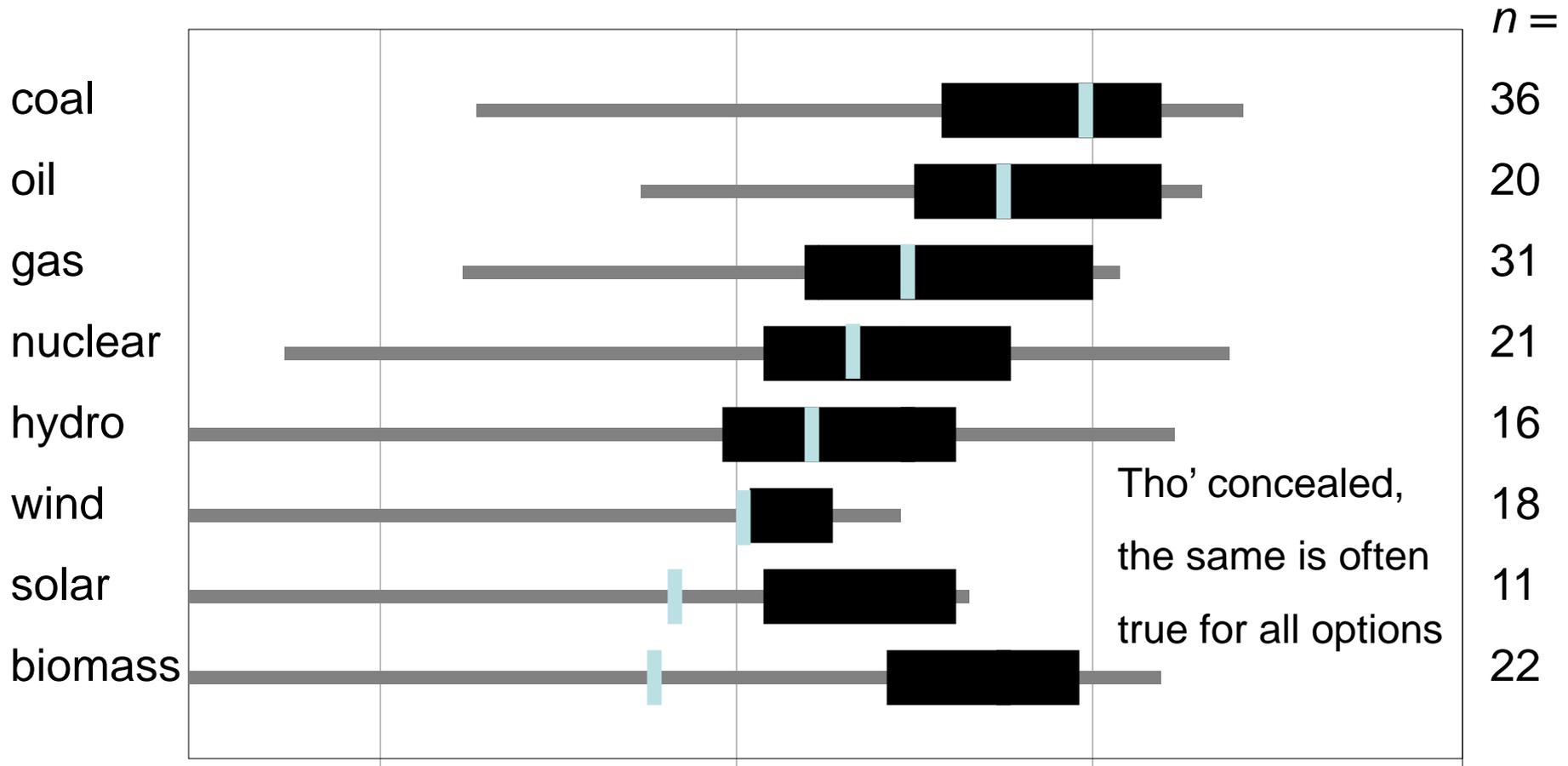
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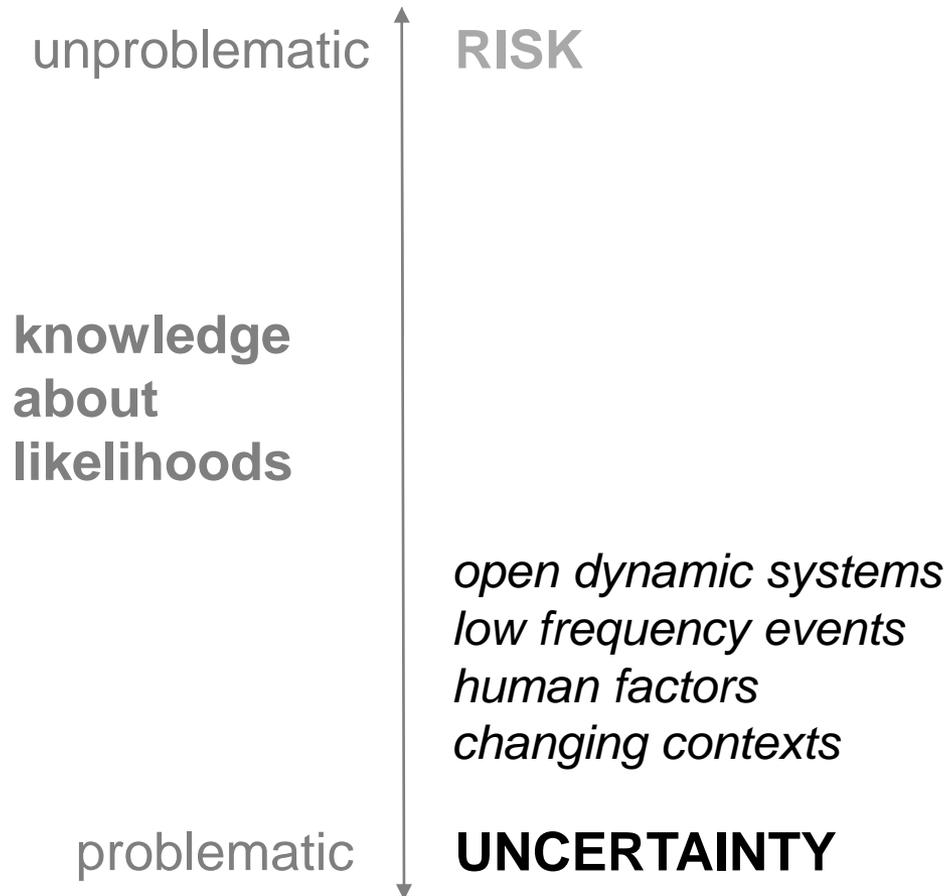
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... 'evidence based' risk literatures can be used to justify any choice

Deliberating about Uncertainty

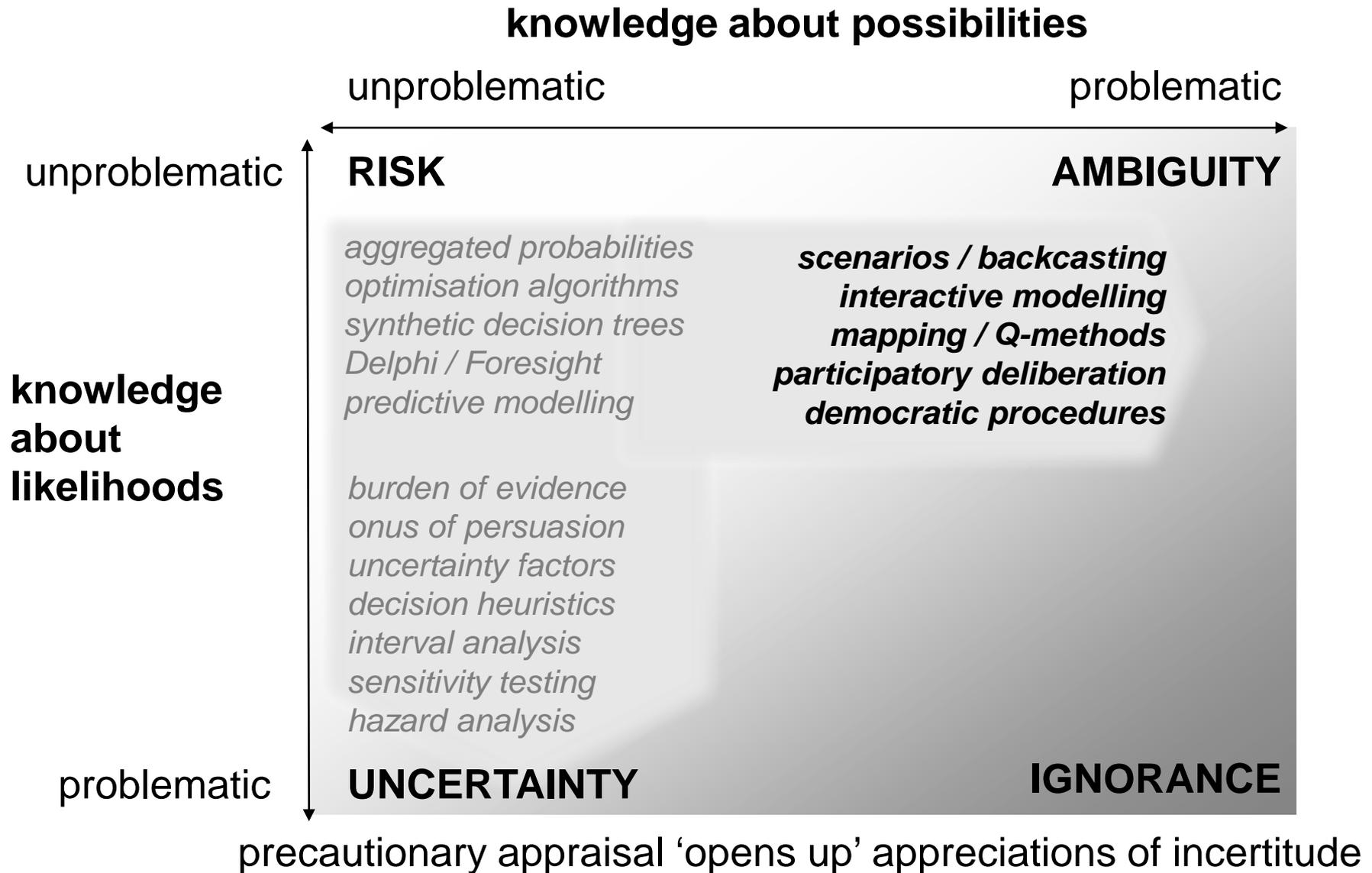
political pressures for 'sound science' ... 'evidence based policy' ...



- Socrates, Lao Tzu, Knight, Keynes, Shackle, Collingridge, Dovers, Ravetz, Wynne ...

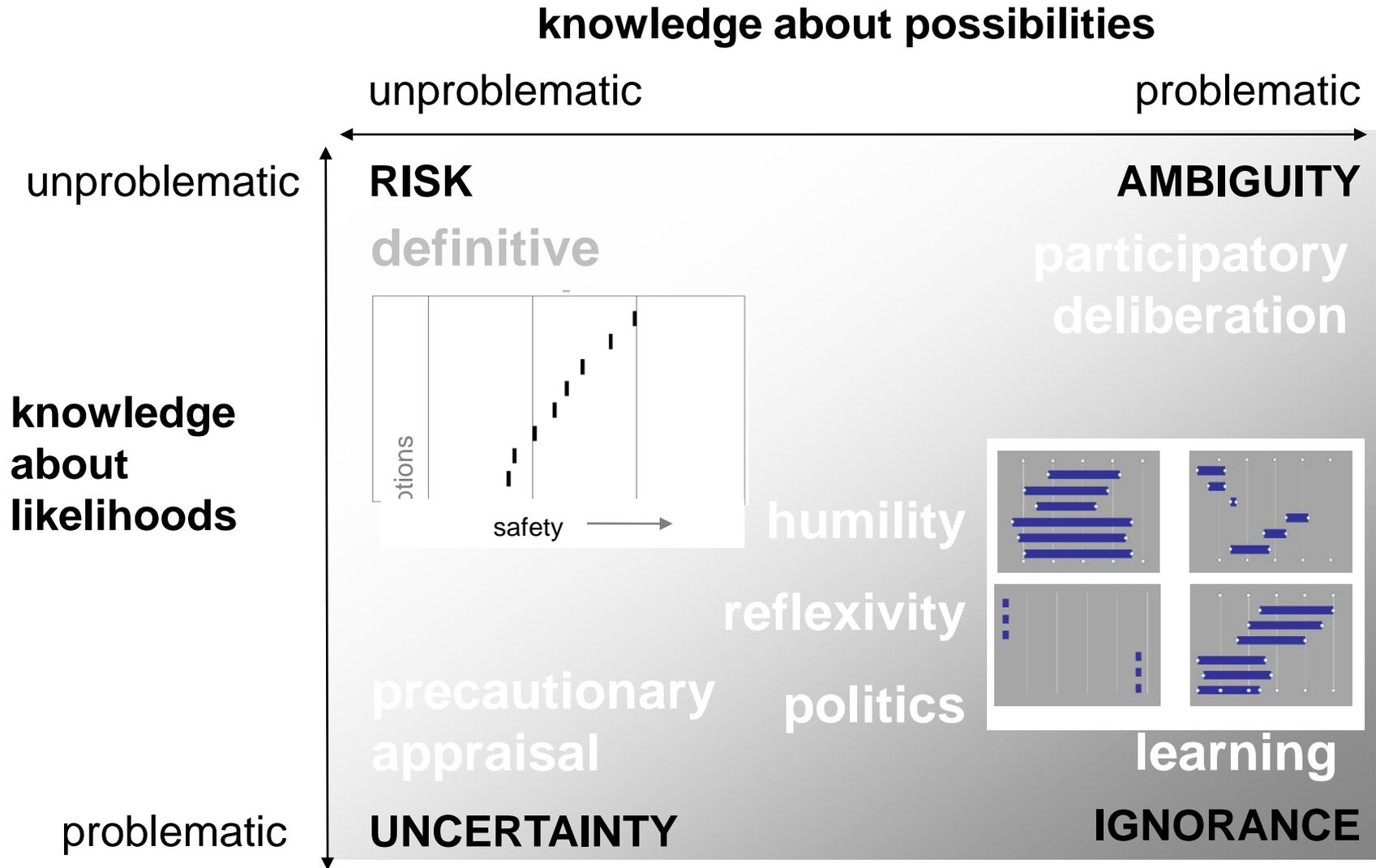
Practical Cinderella Methods

challenge the politics of closure



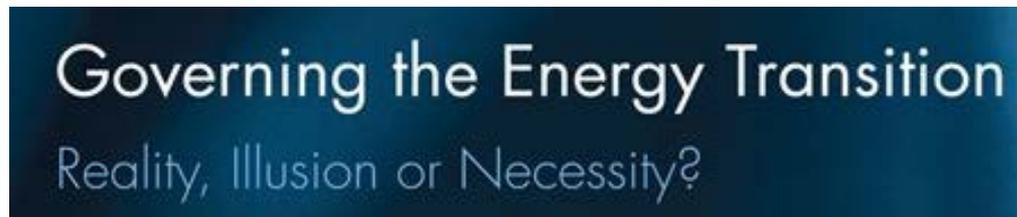
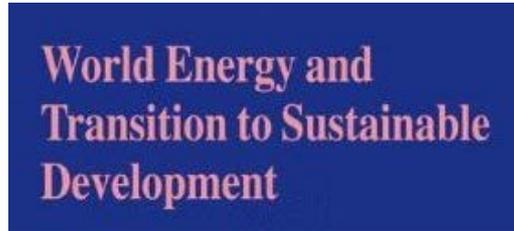
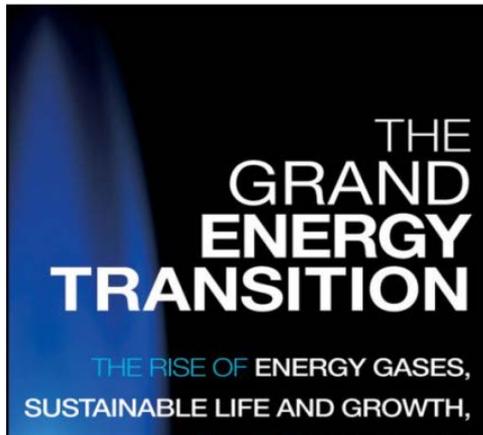
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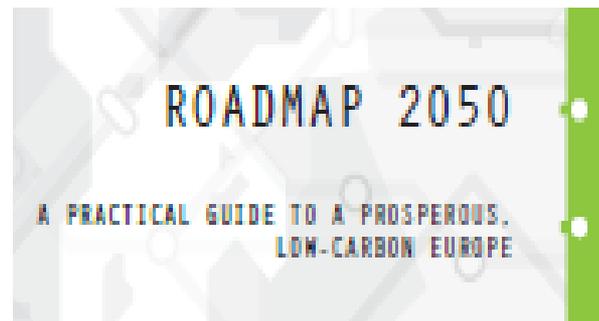


‘opening up’: options, issues, approaches, possibilities, perspectives

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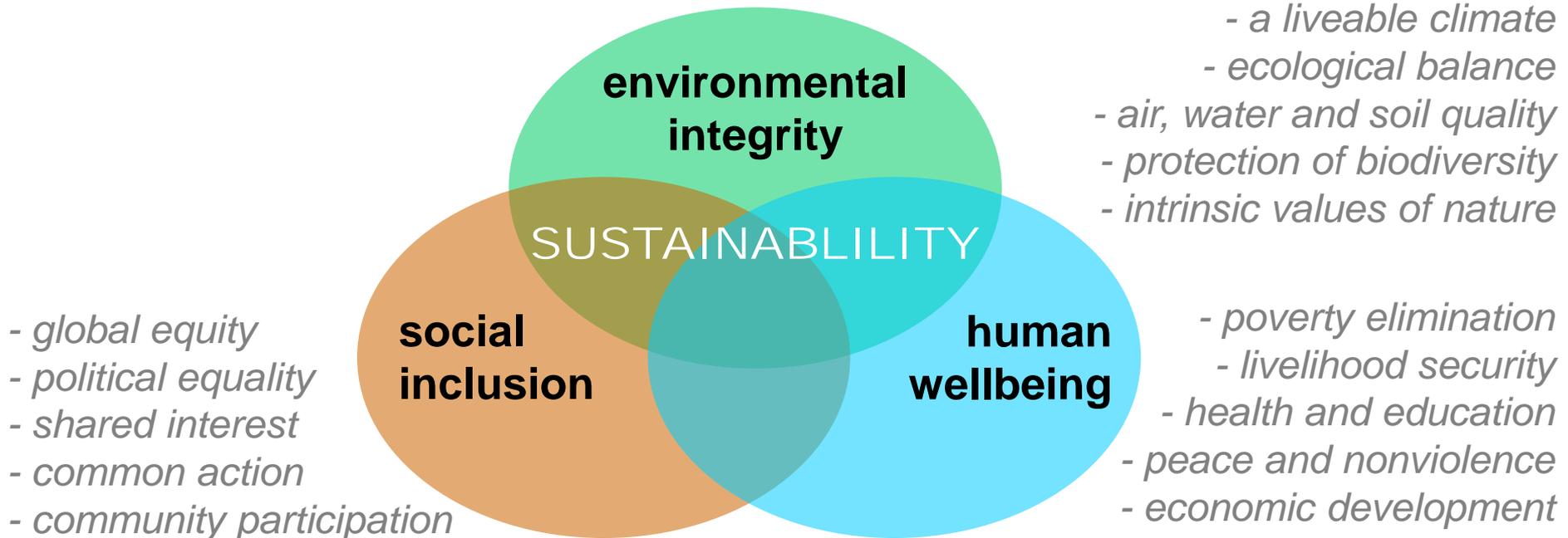


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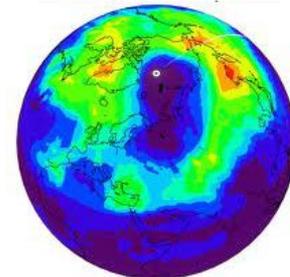
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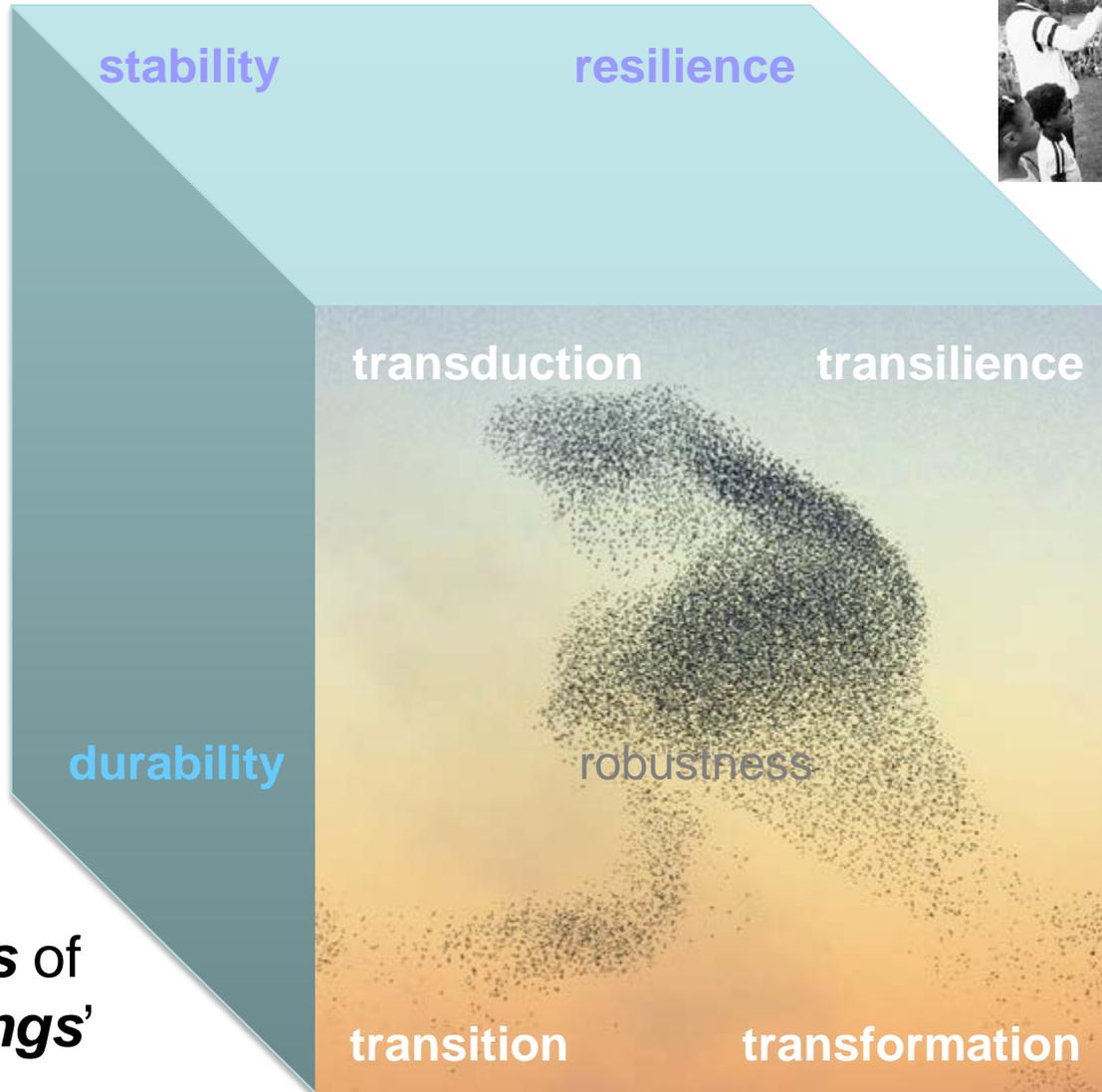
Caring for Continual Struggle

Not so much about orderly structured “responsible policy” ...
... but caring for enabling of unruly distributed collective action

Progressive transformation

not about fallacies of control in a structured transition

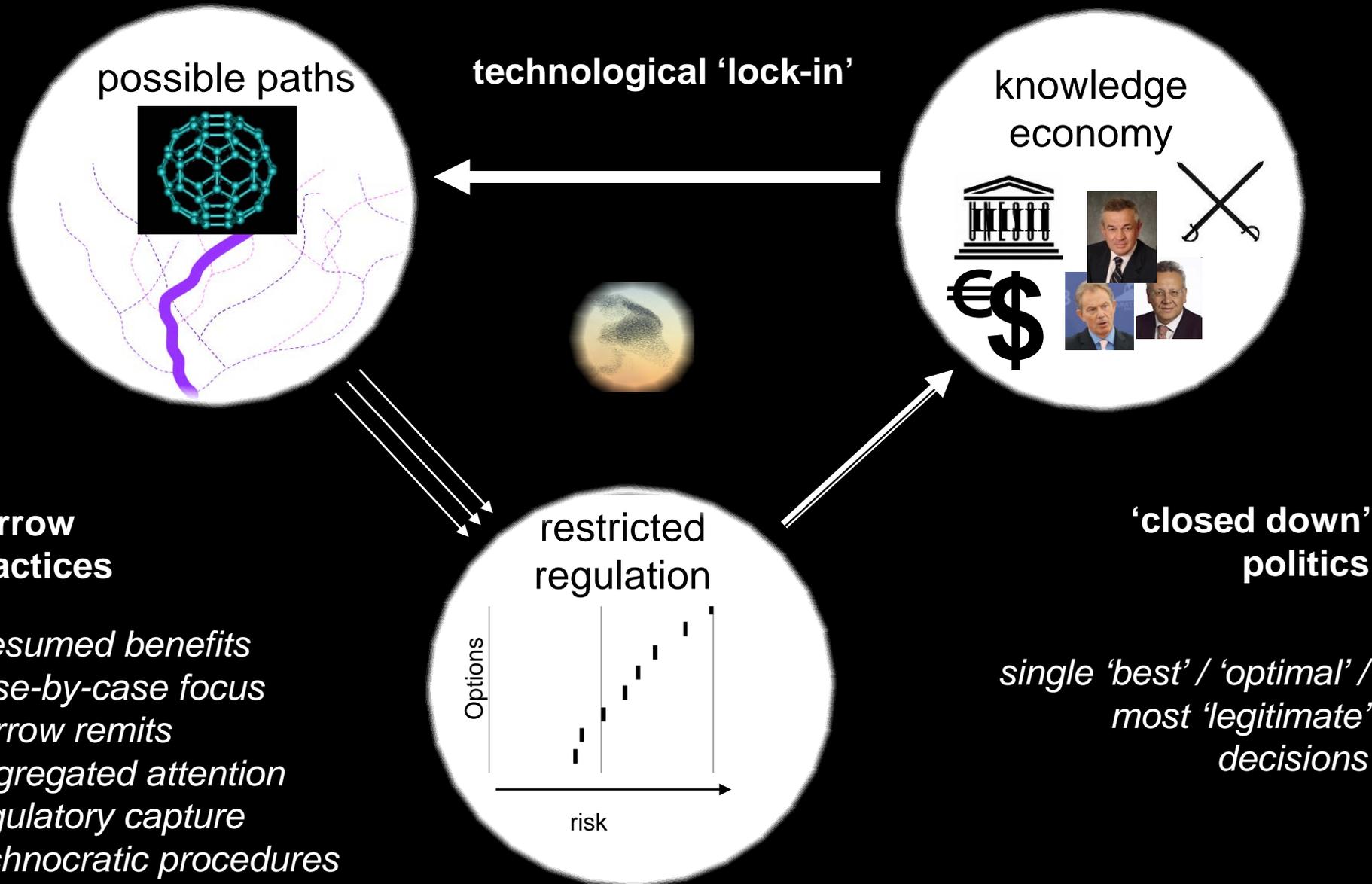
but **culturing** emergent, fractal, multipolar, **murmurations** of ‘*knowing doings*’



trojan horses
political judo
civilising hypocrisies

Conventional Risk Regulation

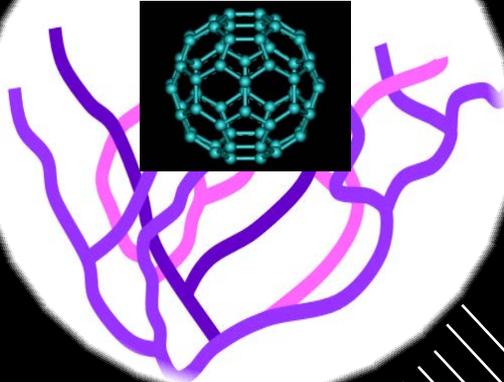
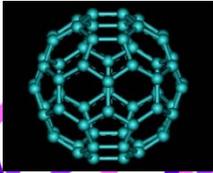
prevailing 'sound science' and 'pro-innovation' structures of control ...



Opening Up Innovation Governance

letting go: diverse repertoires, discontinuation, experimentation, learning, failure

possible paths



innovation democracy

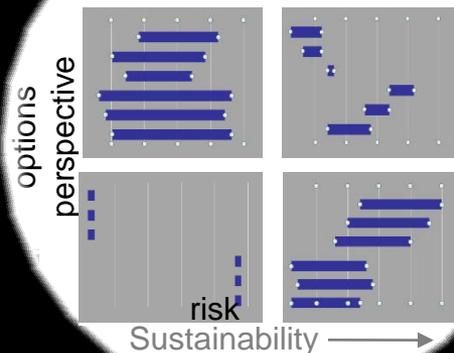


reconciles ostensibly contending imperatives of science and democracy'

strive to broaden out appraisal

*neglected issues
excluded values
alternative pathways
ignored uncertainties
marginalised interests
precautionary principle*

choice discourse



help open up political space
*plural conditional recommendations
dissensus processes
sensitivity analysis
value mapping
heuristics
not metrics*

Catalysing Innovation Democracy

enabling, provoking, pivoting, performing ... space for collective actions

letting go: diverse repertoires, discontinuation,
experimentation, learning, failure

**illuminate
plural pathways**

*document
processes of
closing down
reveal roles of
power in science
and technology*

**strive to
broaden out
appraisal**

*neglected issues
excluded values
alternative pathways
ignored uncertainties
marginalised interests
precautionary principle*

durability

stability

resilience

transduction

transilience

robustness

transition

transformation

**challenge
instrumental
practice**

*trustworthiness
not trust*

*responsibility as
process not state*

**help open up
political space**

*plural conditional
recommendations*

dissensus processes

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*heuristics
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